

14

SITE NAME Metro Disposal Co.  
SITE ID 160980498166

11/25/58

November 25, 1958

EPA Region 5 Records Ctr.



328213

REPORT ON GROUND-WATER RESOURCES  
AT DEERFIELD, LAKE COUNTYby  
H. C. Timblin, Engineering Assistant

This report is prepared at the request of Mr. Eldon Holmquist, Village President, 1311 Woodland Drive, Deerfield, Illinois, for information concerning ground-water possibilities for a supplemental municipal supply.

The following is a copy of a report made by the State Water Survey in August, 1957 on ground-water resources at Deerfield.

This Division has few records of wells finished in the unconsolidated material above the bedrock. A 145-foot well in Section 21 is reported to receive water from gravel, but no other information is available. However in drilling, any water-bearing sand and/or gravel encountered should be tested for production as the water from drift material in this area is not apt to contain hydrogen sulfide.

Ground water in this vicinity is secured largely from wells terminated in the bedrock. Most of the domestic wells were drilled into bedrock until a water-bearing zone was encountered. They have depths of 150 to over 400 feet. These wells were cased with either 4 or 6-inch casing, the length of casing used depending upon the depth to bedrock.

The quantity of water secured from the shallow bedrock wells in this area varies considerably. Some wells produce more than sufficient water for individual household use while others produce more limited quantities of water. Where more than just a few gallons per minute are desired wells are usually drilled into the deeper bedrock formations.

The water from these shallow bedrock wells is generally of moderate mineral content but of relatively low hardness. The hardness depends largely on the location and depth of the well and is unpredictable. An appreciable iron content is found to be present more often than not, and hydrogen sulfide and oil are also frequently found to be present in these wells.

The Village of Lake Bluff recently completed a 20-inch diameter well in Section 20, T44N, R12E. This well was drilled to a depth of 1825 feet. When tested, this well yielded approximately 1430 gpm with 85 feet of drawdown in 8 hours. The non-pumping water level was 210 feet below the ground surface.

A partial chemical analysis conducted on a water sample from this well showed an iron content of 0.7 ppm, a hardness of 312 ppm, and a total mineral content of 468 ppm. This water would be classified as hard and moderately mineralized. Sufficient iron is present to cause some staining.

A 1370-foot well was drilled for the Village of Wheeling in 1956. This well is located in Section 11, T42N, R11E, Cook County. This well yielded 1033 gpm with 135 feet of drawdown in 15 hours. The non-pumping water level was 252 feet below the ground surface. A chemical analysis showed this water to be similar to that at Lake Bluff.

Enclosed is a list of some of the higher capacity wells in the immediate vicinity of Deerfield. Also enclosed is a copy of the State Water Survey Circular No. 17 entitled "Data on the Ground Waters of Lake County, Illinois."

**GROUND WATER RESOURCES IN THE VICINITY OF  
DEERFIELD, T43E, R12E, LAKE COUNTY**

<u>Location</u>	<u>Depth Feet</u>	<u>Non-pumping Water Level Feet</u>	<u>Pumping Water Level Feet</u>	<u>Production Rate GPM</u>	<u>Remarks</u>
NW 1/4 Sec. 16	260	30	60	30	bedrock, 1932
SE 1/4 Sec. 16	206	10		15	gravel, 1942
SE 1/4 Sec. 19	210	68	100	25	bedrock, 6" dia., 1935
NE 1/4 Sec. 19	275	30	40	75	bedrock, 6" dia., 1940
SW 1/4 Sec. 20	218	60	72	70	bedrock, 6" dia., 1941
Sec. 25	1514			225	1933, from 0.7 ppm hardness 91.5 residue 318 ppm
NW 1/4 Sec. 27	1760			300	16" dia. 0 - 121'
NW 1/4 Sec. 31	1443				10" dia. 288 - 1058'
					10" dia. to 310'
					8" dia. 310 - 900'
					6" dia. 900 - 1443'